

REMARKS

Claims 1-59 are all the claims pending in this application. Claims 1-7, 11-36 and 39-50 are withdrawn. Applicants traverse the outstanding rejections for the reasons discussed herein.

In support of Applicants' remarks, Applicants submit herewith the Declaration of Tadashi Ino (i.e., a co-inventor of the present application) under 37 C.F.R. § 1.132, and two published articles as background references.

Entry is respectfully requested.

The Claims are Patentable under 35 U.S.C. § 102(b)

Claims 8-10, 38, and 56 are rejected under 35 U.S.C. § 102(b) as being anticipated by Grot (US 4,433,082).

The Examiner states that Grot discloses aqueous techniques for preparing the copolymer which include contacting the monomer with an aqueous medium containing a free-radical initiator to obtain a slurry of polymer particles in granular form at col. 4, lines 40-55 and lines 62-67.

Applicants respectfully traverse.

Claim 8, from which claims 9-10, 38 and 56 depend, recites in part:

"A fluoropolymer dispersion which comprises the fluoropolymer solid composition dispersed in a liquid medium, said fluoropolymer solid composition containing a fine particle comprising a fluoropolymer, said fluoropolymer having an acid/acid salt group...said fine particle comprising the fluoropolymer containing, at the proportion of at least 25% by mass thereof, a spherical fluoropolymer fine particle..."

However, in the nonaqueous techniques disclosed at col 4, lines 40-55 of Grot, the resultant polymer is separated out of the reaction mixture as a result of the progress of the nonaqueous polymerization. Hence, a dispersion cannot be obtained by this process.

Additionally, the aqueous techniques disclosed at col. 4, lines 62-66 of Grot include contacting the monomers with an aqueous medium containing a free radical initiator to obtain a slurry. These techniques are called “suspension polymerizations”. The resultant polymer is separated out of the reaction mixture as a result of the progress of the suspension polymerization. The result from this process is also a slurry, and not a dispersion.

That is, a “slurry” is different from a “dispersion,” as claimed. The difference between the two terms is well known. Indeed, Grot uses “slurry” in addition to “aqueous colloidal dispersion”.

Further, at col 4, line 66 to col 5, line 4 of Grot, aqueous techniques are disclosed that include contacting the monomers with an aqueous medium containing both a free radical initiator and a telogenically inactive dispersing agent in order to obtain an aqueous colloidal dispersion. Such techniques are called “emulsion polymerizations.”

Grot, however, does not disclose hydrolyzing “without drying.” Rather, Grot discloses coagulating the dispersion at col 5, line 2. Thus, a dispersion containing a spherical fine particle comprising a fluoropolymer having an acid/acid salt group, as claimed, cannot be obtained by the processes described in Grot. That is, Grot fails to disclose each and every element of the claimed fluoropolymer dispersion and therefore does not anticipate claims 8-10, 38 and 56.

In support of their position, Applicants attach hereto a copy of each of *Polymer* 41 (2000) 5829-5838; and *Langmuir* 1998, 14, 1977-1983. In the *Polymer* article, a solution was obtained according to the standard procedure described in Grot WG, Chadds C, European Patent, 1982. See the reference to footnote [19] at page 5830, right column, lines 17-24. A colloidal dispersion of rod like particles is obtained as illustrated in Fig 7 at page 5835. Applicants attach hereto as further evidence *Langmuir* 1998, 14, 1977-1983.

Withdrawal of the foregoing rejection under 35 U.S.C. § 102(b) is respectfully requested.

The Claims are Patentable under 35 U.S.C. § 103(a)

Claims 8, and 51-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bekiarian et al (US 2004/0167289) and Doyle et al (US 6,140,436) as evidenced by Odian (*Principles of Polymerization*).

Claims 9-10 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bekiarian et al (US 2004/0167289) and Doyle et al (US 6,140,436) as evidenced by Odian (*Principles of Polymerization*) as applied to claims 8, and 51-56 above and further in view of Grot (US 4,433,082).

Claims 37, and 57- 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bekiarian et al (US 2004/0167289) in view of Doyle et al (US 6,140,436).

The Examiner takes the position that Bekiarian discloses a process of emulsion polymerization to obtain polymeric particles which, as evidenced by Odian, include the shape and size of particles claimed. The Examiner further believes that Applicants' own admission discloses that the fluoropolymer solid compositions comprising spherical fluoropolymer fine particles can be prepared obtained by emulsion polymerization.

Applicants respectfully traverse.

Emulsion polymerization of soluble monomers having the claimed features, i.e., a sulfonic acid group, $-\text{SO}_2\text{NR}^{17}\text{R}^{18}$, a carboxyl group, $-\text{SO}_3\text{NR}^1\text{R}^2\text{R}^3\text{R}^4$, $-\text{SO}_3\text{M}^1_{1/L}$, $-\text{COONR}^5\text{R}^6\text{R}^7\text{R}^8$ or $-\text{COOM}^2_{1/L}$ does not produce a spherical fluoropolymer particle. See the attached Rule 132 Declaration of Tadashi Ino, one of the co-inventors of the present application. In the Declaration, Mr. Ino illustrates the difference between Example 5 of the present invention,

in which polymer particles produced are substantially spherical, as opposed to that resulting from the emulsion polymerization according to Example 1B of U.S. patent 7482415.

The emulsion polymerization of insoluble monomers having $-SO_2X^1$ and/or $-COZ^1$ produces a spherical fluoropolymer particle so that the dispersion containing spherical fluoropolymer particles having $-SO_2X^1$ and/or $-COZ^1$ is obtained. When hydrolyzing the fluoropolymer “without drying,” a dispersion containing a spherical fine particle comprising a fluoropolymer having an acid/acid salt group can be obtained. See id.

In this regard, none of Bekiarian et al, Doyle et al and Odian, alone or in combination, disclose or suggest hydrolyzing “without drying”. Hence, Bekiarian et al in view of Doyle et al, as evidenced by Odian, does not disclose or suggest a dispersion containing a spherical fine particle comprising a fluoropolymer having an acid/acid salt group, as claimed. See *Polymer* 41 (2000) 5829-5838. Grot is described above, and further fails to remedy the deficiencies of the remaining art cited in this respect. As such, the present invention would not have been obvious over any combination of art cited by the Examiner.

Withdrawal of all rejections and allowance of claims 8-10, 37, 38 and 51-59 is earnestly solicited.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Ryan C. Cady
Registration No. 56,762

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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